

Work Order ID 80828

\*80828\*

Page 1

March-01-12 10:08:56 AM

Item ID: D2571

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Saddle, Fwd Out 205

Start Date: 01/03/2012 Start Qty: 12.00

\*12\*

Cust Item ID:

Required Date: 21/03/2012 Req'd Qty: 12.00

\*12\*

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start \*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2571	Rev E								

100

0.00

\*100\*

HAAS CNC VERTICAL MACHINING #1

HAAS I

Memo

0.00

HAAS CNC vertical machine #1

Program Batch No. 80828 Double check by: *SS* 1-Machine Step No 1  
per Folio FA051 and inspect per attached Dimension Sheets2-Machine Step  
No 2 per Folio FA051 and inspect per attached Dimension Sheets3-Machine  
Step No 3 per Folio FA051 and inspect

110

0.00

\*110\*

CONVENTIONAL MILLING MACHINE

Mill Conv

Memo

0.00

Conventional Milling Machine

Machine keyway as per dwg D2571 & D2572

120

0.00

\*120\*

QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

Quality Control

*SS* release 12  $\phi$  *(Pto)*

*SS* release 12  $\phi$

*SS* 12-03-05 *(12)*  $\phi$  *(Pto)*

Dart Aerospace Ltd

W/O: 80828		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D2571 PAR #:   Fault Category: Machining NCR: Yes No   DQA:   Date: 12/03/23  
 Resolution: Acceptable Disposition: Acceptable QA: N/C Closed:   Date: 12/3/23

NCR: 12-12101		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
12-03-13	120	Wall thickness @ location 2.000" rad varies up to +.005" over tolerance and +.010" @ 1.385 Rad locations (Rad's are within tolerance) on 10 pcs	CP 12.03.13 BS/042	Acceptable	BS 12-03-13	BA 12/03/15	CP 12.03.13 BS/042	S 12/03/15
		P.C. operator error						

NOTE: Date & initial all entries

Work Order ID 80828

\*80828\*

Page 2

March 01 12:10:08:56 AM

Item ID: D2571

Accept

\*N900040100\*

Setup Start

\*NS1\*

Revision ID:

Stop

\*NS2\*

Item Name: Saddle, Fwd Out 205

Start Date: 01/03/2012 Start Qty: 12.00

\*12\*

Cust Item ID:

Required Date: 21/03/2012 Req'd Qty: 12.00

\*12\*

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

\*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop

\*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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130 QC8- Inspect parts - second check 0.00

\*130\*

QC

Memo

0.00

Y.A 12/03/15

12

0

Quality Control

140 Chemical Conversion Coat per QSI005 4.1 0.00

\*140\*

HandFinish

Memo

0.00

Hand Finishing

12X0 M/12/03/15

150 White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum 0.00

\*150\*

Powdercoat

Memo

0.00

Powder Coating

START TIME:

2h20

2h50 FINISH TIME:

OVEN TEMPERATURE:

320°F

M 120222:

12 8 (2P) 12/03/15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 80828

March-01-12-10:08:56-AM

\*80828\*

Page 3

Item ID: D2571 Accept \*N900040100\* Setup Start \*NS1\*  
 Revision ID: Stop \*NS2\*  
 Item Name: Saddle, Fwd Out 205  
 Start Date: 01/03/2012 Start Qty: 12.00 \*12\* Cust Item ID:  
 Required Date: 21/03/2012 Req'd Qty: 12.00 \*12\* Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start \*NR1\*  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC3- Inspect Part Finish	0.00							
*160*						12	0	ll	12/03/16
QC	Memo	0.00							
Quality Control									
170	Identify as per dwg & Stock Location: <u>ST430</u>	0.00							
*170*									
Packaging	Memo	0.00							
Packaging									
180	QC21- Final Inspection - Work Order Release	0.00							
*180*									
QC	Memo	0.00							
Quality Control									

(12x) SP 12-03-16

12/3/16

12-03-16

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

March-01-12 10:09:00 AM

Page 1

Work Order ID: 80828

**\*80828\***

Parent Item: D2571

**\*D2571\***

Parent Item Name: Saddle, Fwd Out 205

Start Date: 01/03/2012

Required Date: 21/03/2012

Start Qty: 12.00

Required Qty: 12.00

Comments: IPP: 102.10.02Re-format; Change to Dwg Rev. D & incorporated D2572KJ

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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D6101-007

Manufactured

No

100

Each

83.0000

1

12

**\*D6101-007\***

Saddle Billet

79589 y2

\*\*

21 12-03-09

Location

Loc Qty

Loc Code

MAT042

78

79589

50

79875

28

MAT045

5

70680

3

76839

2

X10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



<b>DART AEROSPACE LTD</b>		<b>Work Order:</b> 80828
<b>Description:</b> Saddle, Fwd Outboard		<b>Part Number:</b> D2571
<b>Inspection Dwg:</b> D2571 Rev. E		<b>Page 1 of 1</b>

Inspect dimensions highlighted on inspection sheet drawing D2571 Rev. E and record below:

Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				1	2	3	4		
A	0.438	0.443		0.442	.442	.442	.439		
B	1.745	1.755		1.7485	1.749	1.748	1.750		
C	3.495	3.505		3.497	3.496	3.499	3.495		
D	1.745	1.755		1.7485	1.745	1.748	1.7480		
E	7.990	8.010		8.002	7.998	8.002	8.003		
F	0.490	0.510		0.504	.502	.498	.503		
G	0.257	0.262		0.259	.258	.258	.258		
H	0.375	0.380		0.376	.377	.377	.377		
I	0.490	0.510		0.5005	.499	.499	.501		
J	1.174	1.184		1.180	1.177	1.178	1.178		
K	0.558	0.578		0.5675	.565	.563	.570		
L	1.174	1.184		1.179	1.178	1.178	1.178		
M	1.490	1.500		1.497	1.495	1.495	1.495		
N	2.495	2.505		2.499	2.499	2.499	2.499		
O	3.869	3.879		3.874	3.873	3.874	3.874		
P	0.115	0.135		0.128	.131	.124	.124		
Q	0.115	0.135		0.130	.129	.131	.135		
R	0.240	0.260		0.250	.250	.253	.253		
S	0.115	0.135		0.130	.130	.132	.135		
T	0.178	0.198		0.188	.188	.188	.188		
U	2.940	2.980		2.9585	2.958	2.956	2.956		
V	0.230	0.250		0.242	.232	.240	.250		
W	0.115	0.135		0.123	.125	.130	.135		
X	0.308	0.313		0.309	0.309	0.309	0.309		
Y	0.760	0.765		0.764	0.764	0.764	0.764		
Z	0.352	0.372		0.363	.362	.361	0.362		
AA	0.470	0.530		0.500	.500	.500	.500		
AB	0.615	0.635		.625	.627	.625	.625		
AC	0.053	0.073		0.062	.063	.063	.063		
AD	0.240	0.260		0.250	.254	.247	.250		
AE	1.375	1.395		1.385	1.395	1.395	1.380		
AF	0.115	0.135		0.130	.127	.130	.125		
AG	0.240	0.280		0.250	.254	.260	.253		
AH	0.240	0.260		0.250	.242	.247	.250		
AI	2.000	2.020		2.000	2.009	2.009	2.009		
AJ	0.023	0.043							
Accept/Reject									

Measured by:	JD
Date:	12/03/07

Audited by:	JA
Date:	12/03/15

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.24	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b> 80828
<b>Description:</b> Saddle, Fwd Outboard		<b>Part Number:</b> D2571
<b>Inspection Dwg:</b> D2571 Rev. E		<b>Page 1 of 1</b>

Inspect dimensions highlighted on inspection sheet drawing D2571 Rev. E and record below:

Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				15	16	17	18		
A	0.438	0.443		.439	.439	.439	.439		
B	1.745	1.755		1.750	1.750	1.750	1.750		
C	3.495	3.505		3.500	3.500	3.500	3.500		
D	1.745	1.755		1.750	1.750	1.750	1.750		
E	7.990	8.010		8.000	8.001	8.002	8.004		
F	0.490	0.510		.508	.502	.505	.503		
G	0.257	0.262		.258	.258	.258	.258		
H	0.375	0.380		.376	.377	.376	.376		
I	0.490	0.510		.503	.502	.502	.502		
J	1.174	1.184		1.178	1.176	1.179	1.179		
K	0.558	0.578		.570	.570	.570	.570		
L	1.174	1.184		1.177	1.178	1.179	1.179		
M	1.490	1.500		1.495	1.499	1.495	1.495		
N	2.495	2.505		2.499	2.499	2.500	2.500		
O	3.869	3.879		3.872	3.874	3.874	3.874		
P	0.115	0.135		.126	.126	.126	.126		
Q	0.115	0.135		.135	.135	.135	.135		
R	0.240	0.260		.251	.251	.251	.251		
S	0.115	0.135		.135	.135	.135	.135		
T	0.178	0.198		.188	.188	.188	.188		
U	2.940	2.980		2.958	2.959	2.960	2.960		
V	0.230	0.250		.246	.247	.240	.240		
W	0.115	0.135		.135	.130	.130	.130		
X	0.308	0.313		.310	.310	.310	.310		
Y	0.760	0.765		.761	.761	.761	.761		
Z	0.352	0.372		.360	.360	.360	.360		
AA	0.470	0.530		.500	.500	.500	.500		
AB	0.615	0.635		.624	.630	.628	.628		
AC	0.053	0.073		.063	.063	.063	.063		
AD	0.240	0.260		.250	.255	.249	.250		
AE	1.375	1.395		1.387	1.389	1.389	1.389		
AF	0.115	0.135		.135	.135	.135	.135		
AG	0.240	0.280		.252	.252	.250	.250		
AH	0.240	0.260		.244	.247	.247	.247		
AI	2.000	2.020		2.000	2.004	2.004	2.004		
AJ	0.023	0.043							
Accept/Reject									

Measured by: 86
Date: 12/03/15

Audited by: B.A
Date: 12/03/15

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.24	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	

<b>DART AEROSPACE LTD</b>	<b>Work Order:</b> 80828
<b>Description:</b> Saddle, Fwd Outboard	<b>Part Number:</b> D2571
<b>Inspection Dwg:</b> D2571 Rev. E	<b>Page 1 of 1</b>

Inspect dimensions highlighted on inspection sheet drawing D2571 Rev. E and record below:

Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				<sup>9</sup> 1	<sup>10</sup> 2	<sup>11</sup> 3	<sup>12</sup> 4		
A	0.438	0.443		.441	.441	.441	.441		
B	1.745	1.755		1.750	1.750	1.750	1.750		
C	3.495	3.505		3.500	3.500	3.500	3.500		
D	1.745	1.755		1.750	1.750	1.750	1.750		
E	7.990	8.010		8.000	8.000	8.000	8.000		
F	0.490	0.510		.503	.503	.503	.503		
G	0.257	0.262		.257	.257	.257	.257		
H	0.375	0.380		.376	.376	.376	.376		
I	0.490	0.510		.501	.501	.501	.501		
J	1.174	1.184		1.179	1.179	1.179	1.179		
K	0.558	0.578		.570	.570	.570	.570		
L	1.174	1.184		1.179	1.179	1.179	1.179		
M	1.490	1.500		1.495	1.495	1.495	1.495		
N	2.495	2.505		2.500	2.500	2.500	2.500		
O	3.869	3.879		3.874	3.874	3.874	3.874		
P	0.115	0.135		.126	.126	.126	.126		
Q	0.115	0.135		.135	.135	.135	.135		
R	0.240	0.260		.251	.251	.251	.251		
S	0.115	0.135		.135	.135	.135	.135		
T	0.178	0.198		.188	.188	.188	.188		
U	2.940	2.980		2.960	2.960	2.960	2.960		
V	0.230	0.250		.240	.240	.240	.240		
W	0.115	0.135		.130	.130	.130	.130		
X	0.308	0.313		.310	.310	.310	.310		
Y	0.760	0.765		.761	.761	.761	.761		
Z	0.352	0.372		.360	.360	.360	.360		
AA	0.470	0.530		.500	.500	.500	.500		
AB	0.615	0.635		.625	.625	.625	.625		
AC	0.053	0.073		.063	.063	.063	.063		
AD	0.240	0.260		.250	.250	.250	.250		
AE	1.375	1.395		1.385	1.385	1.385	1.385		
AF	0.115	0.135		.135	.135	.135	.135		
AG	0.240	0.280		.252	.252	.252	.252		
AH	0.240	0.260		.247	.247	.247	.247		
AI	2.000	2.020		2.004	2.004	2.004	2.004		
AJ	0.023	0.043		.032	.032	.032	.032		
Accept/Reject									

Measured by:	36
Date:	12/03/10

Audited by:	B.A
Date:	12/03/15

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.24	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

UNCONTROLLED  
SUBJECT TO

WITNESS  
V. C. J.  
NO. 80828  
12/03/01

RELEASED

05.12.01

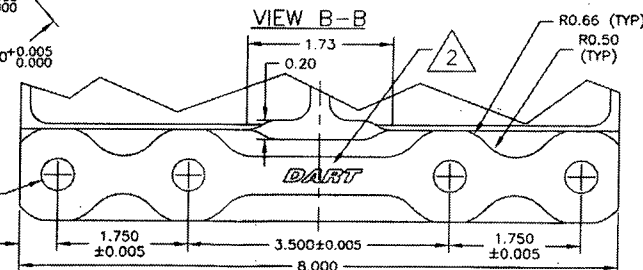
# NOTES

MATERIAL: 7075-T7351 (3Q-A-250/12) (REF DART SPEC. D6102-001)  
FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1  
POWDER COAT GLOSS WHITE (REF 4.3.5.1) PER DART  
QSI 005 4.3  
BREAK ALL SHARP EDGES 0.010 TO 0.020  
TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.

- 1 ENGRAVE PART AND BATCH NUMBER IN THIS AREA TO MAX DEPTH OF 0.010
- 2 ENGRAVE DART LOGO TO MAX DEPTH OF 0.015 WITH MIN RAD 0.125
- 3 CHAMFER 0.063" x 45° AROUND THIS SURFACE (TYPICAL 2 PLACES)
- 4 CHAMFER 0.063" x 45° ALL AROUND
- 5 CHAMFER 0.033" x 45° (SEE DETAIL C)

E

## VIEW B-B

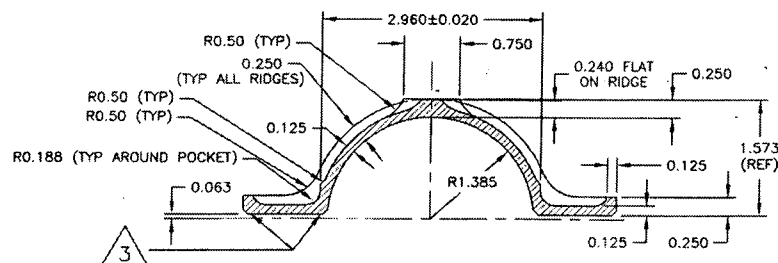
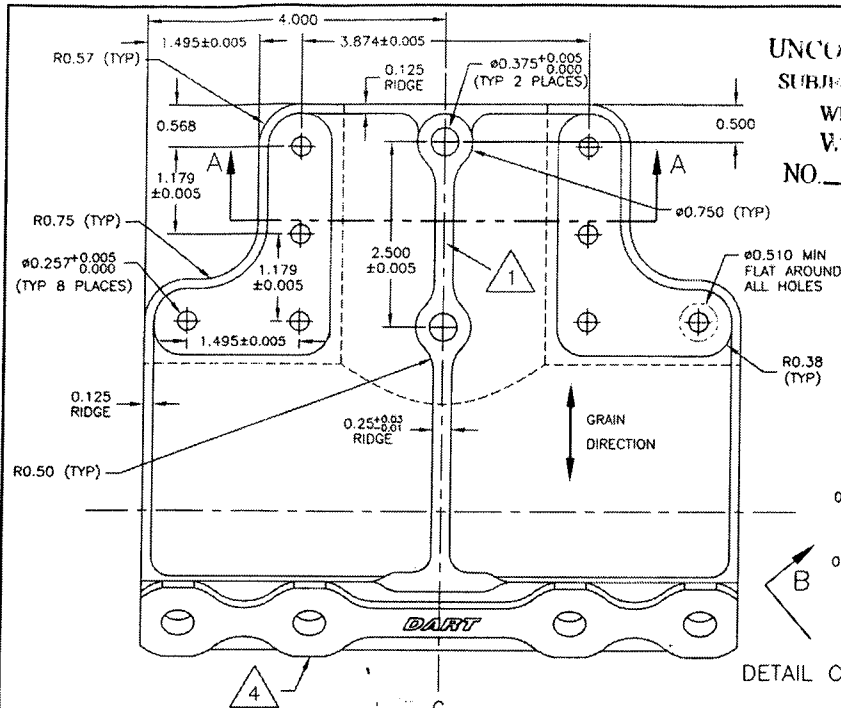
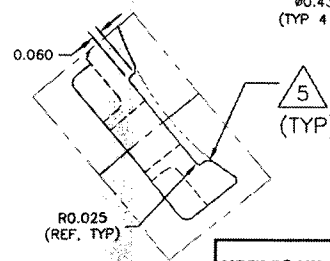


E	05.07.13	ADD CHAMFER ON RIDGE, NOTE 5
D	02.09.06	ADD RIDGES; TIGHTEN TOLERANCES
C	99.10.22	INCORP. DEO 9123/9079/9102 ADD DIMENSIONS PER TSR A1177
B	96.12.02	ADD GRAIN DIR., 0.438 WAS 0.425
A	96.09.16	NEW ISSUE
DESIGN	DS	DRAWN BY PH
CHECKED	#	APPROVED #
DATE	05.07.13	DRAWING NO. D2571
		TITLE OUTER FWD SADDLE
		REV. E SHEET 1 OF 1 SCALE 2:3

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DETAIL C  
SCALE 4:3



## SECTION A-A

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries